

Request for Reconsideration
U.S. Patent Application No. 09/654,182

disclose each and every type of organic material attached to the carbon. However, the Examiner asserts that Ghosal et al. discloses the claimed types of organic materials attached to the carbon adsorbents used in the chromatography. Thus, the Examiner concludes that the invention as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the disclosure of the Funkenbusch et al. with the teachings of Ghosal et al. For the following reasons, the rejection under 35 U.S.C. §103(a) is respectfully traversed.

The claimed invention involves a chromatography column having a stationary face and a mobile face, wherein the stationary face is formed of carbonaceous material having attached at least one organic group.

Funkenbusch et al. describes a completely different invention. As noted in the abstract, Funkenbusch et al. describes polymer-coated carbon-clad inorganic oxide particles. It is important for the Examiner to recognize that attaching at least one organic group to a carbonaceous material is different than a polymer-coated carbon. The claims of the present invention make it clear that the organic groups are attached to the carbonaceous material. By contrast, Funkenbusch et al. does not show any sort of attachment between the polymeric coating and the carbon cladding.

The text set forth at column 18, line 25 to column 19, line 45 of Funkenbusch et al. describes that the polymers are merely coated or encapsulated onto the carbon-clad inorganic oxide particles. No attachment is described. Therefore, in Funkenbusch et al., the polymeric coating is only a coating, and the Examiner does not point to any part of Funkenbusch et al. to show an attachment of the polymer to the carbon portion of the particle. One skilled in the art would not consider a coating to be an attachment onto the particle of the organic groups. In light of that, the organic groups of Funkenbusch et al. are not attached to a carbonaceous material in the manner of

the claimed invention. Consequently, Funkenbusch et al. does not teach or suggest the claimed invention.

With respect to Ghosal et al., it relates to an adsorbent composition containing a modified carbonaceous material capable of adsorbing and adsorbate, wherein at least one organic group is attached to the carbonaceous material. Furthermore, Ghosal et al. describes different methods to increase the adsorption capacity of a carbonaceous material capable of adsorbing an adsorbate and methods to adsorb an adsorbate using the adsorbent composition. Ghosal et al. only describes modified carbon adsorbent and processes for adsorbing using the same. Ghosal et al. does not teach or suggest a chromatography column comprising a column having a stationary phase and a mobile phase, wherein the stationary phase comprises carbonaceous material having attached at least one organic group. Consequently, Ghosal et al. does not teach or suggest the claimed invention.

Moreover, Ghosal et al. describes at least one organic group that is attached to the carbonaceous material, while Funkenbusch et al. describes a polymer-coated carbon-clad inorganic oxide particle. Ghosal et al. and Funkenbusch et al. are directed to completely unrelated inventions, and as such, one skilled in the art would not substitute the modified carbonaceous material of Ghosal et al. in Funkenbusch et al. It is clear that Ghosal et al. and Funkenbusch et al. are non-analogous art and one skilled in the art would not be motivated to combine the two references. With respect to the different organic groups, the claimed invention, in many of the dependent claims, relate to complex groups attached onto the carbonaceous material. The Examiner argues these groups would be obvious. The inventors respectfully disagree. The Examiner has not shown how it would be obvious to attach these groups and provide a successful chromatography column. Funkenbusch et al. doesn't show this nor does Ghosal et al. It appears the only way to achieve this

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Funkenbusch et al. doesn't show this nor does Ghosal et al. It appears the only way to achieve this conclusion is by the use of hindsight which is not permitted.

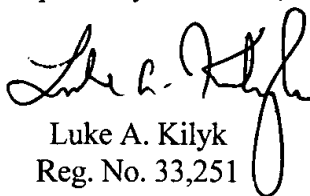
Accordingly, for the reasons set forth above, claims 1, 5, and 6 are patentable. Claims 2-4, 7-10, and 16-49 are dependent directly or indirectly on claims 1, 5, and 6. Therefore, the reasons set forth above with respect to the patentability of claims 1, 5, and 6 are also applicable to claims 2-4, 7-10, and 16-49. Accordingly, the rejection under 35 U.S.C. §103(a) over Funkenbusch et al. in view of Ghosal et al. should be withdrawn.

CONCLUSION

In view of the foregoing remarks, the applicants respectfully request consideration of this application and the timely allowance of the pending claims.

If there are any other fees due in connection with the filing of this response, please charge the fees to Deposit Account No. 03-0060. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and should also be charged to said Deposit Account.

Respectfully submitted,


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